

L Number	Hits	Search Text	DB	Time stamp
1	9	"5928159"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 10:51
2	2	("5928159").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 10:52
3	2	((("5928159").PN.) and (impedance or measure)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 11:05
4	0	((("5928159").PN.) and (cool or cooling or cold or chill or chilled)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 11:05
5	6	((("6241725,") or ("5928159,") or ("5591162")).PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 11:05
6	3	((("6241725,") or ("5928159,") or ("5591162")).PN.) and (impedance or measure)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 11:40
11	3	((("6241725,") or ("5928159,") or ("5591162")).PN.) and (sense or detect or measure or sensor) and temperature	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 11:34
12	8	SHARKEY-HUGH-J	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 11:38
13	1	SHARKEY-HUGH-J and imped\$5	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 11:38
14	0	6517568.URPN.	USPAT	2003/07/02 11:39
15	14	6073051.URPN.	USPAT	2003/07/02 11:39
16	12	6073051.URPN. and (impedance or measure)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 11:40
17	9	6073051.URPN. and impedance	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 11:40
-	820	606/27	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/02 10:51
-	844	606/28	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/30 15:53

-	273	(606/28).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 15:53
-	267	(606/27).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 15:53
-	267	606/27 AND ((606/27).CCLS.)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 15:54
-	273	606/28 and ((606/28).CCLS.)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 15:54
-	175	((606/28).CCLS.) not 606/27	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 15:56
-	0	((606/27).CCLS.) not 606/27	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 15:57
-	246	((606/28).CCLS.) not ((606/27).CCLS.)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 15:57
-	175	((606/28).CCLS.) not ((606/27).CCLS.) not 606/27	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 16:07
-	125	(606/29).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 16:07
-	513	((606/28).CCLS.) or ((606/27).CCLS.)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 16:07
-	107	((606/29).CCLS.) not ((606/28).CCLS.) or ((606/27).CCLS.)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 16:12
-	35	(606/30).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 16:13
-	146	(606/31).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 16:14
-	637	((606/28).CCLS.) or ((606/27).CCLS.) or ((606/29).CCLS.) or ((606/30).CCLS.)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/06/30 16:29

-	92	((606/31).CCLS.) not (((606/28).CCLS.) or ((606/27).CCLS.) or ((606/29).CCLS.) or ((606/30).CCLS.))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/30 16:40
-	153	(606/47).CCLS.	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/30 17:11
-	729	((606/31).CCLS.) or (((606/28).CCLS.) or ((606/27).CCLS.) or ((606/29).CCLS.) or ((606/30).CCLS.))	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/30 16:40
-	148	((606/47).CCLS.) not (((606/31).CCLS.) or (((606/28).CCLS.) or ((606/27).CCLS.) or ((606/29).CCLS.) or ((606/30).CCLS.)))	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/30 16:40
-	580	(606/49).CCLS.	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/30 17:11
-	786	((606/28).CCLS.) or ((606/27).CCLS.) or ((606/29).CCLS.) or ((606/30).CCLS.) or ((606/47).CCLS.)	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/30 17:12
-	537	((606/49).CCLS.) not (((606/28).CCLS.) or ((606/27).CCLS.) or ((606/29).CCLS.) or ((606/30).CCLS.) or ((606/47).CCLS.))	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/01 12:02
-	2	("5591162").PN.	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/01 12:02
-	2	(("5591162").PN.) and (electrode or temperature or sensor or heating or heat)	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/01 12:13
-	1	(("5591162").PN.) and (disc or vertebrae or back or spine)	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/01 12:51
-	44	5591162.URPN.	USPÄT	2003/07/01 12:14
-	1	(("5591162").PN.) and (disc or vertebrae or back or spine or spinal)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/01 13:01
-	621	(607/96).CCLS.	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/01 13:01
-	628	(607/101).CCLS.	USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/07/01 15:02

-	4	((("6241725,") or ("5928159,") or ("5591162")).PN.) and (impedance or cool or cooling or sensor or sense)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/07/01 15:08
-	4	((("6241725,") or ("5928159,") or ("5591162")).PN.) and (impedance or cool or cooling or sensor or sense)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/07/01 15:18
-	5	((("6241725,") or ("5928159,") or ("5591162")).PN.) and insulat\$5	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/07/01 15:18

Inventor
Search

8/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

015206006 **Image available**
WPI Acc No: 2003-266541/200326
XRPX Acc No: N03-211744

Received value decoding method for disk drive, involves estimating amount of jitter in channel through which received value is transmitted, based on which boundary is moved to enlarge spaces containing large amount of jitter

Patent Assignee: FU L K (FULK-I); JEON T (JEON-I); KIM Y (KIMY-I); LEUNG M (LEUN-I)

Inventor: FU L K; JEON T; KIM Y; LEUNG M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020184597	A1	20021205	US 2001681233	A	20010302	200326 B

Priority Applications (No Type Date): US 2001681233 A 20010302

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20020184597	A1	15	H03M-013/03	

Abstract (Basic): US 20020184597 A1

NOVELTY - A received value is determined whether it is provided in a space containing decode values (90,92). If received value is in portions of space closest to point associated with decode values, received value is decoded. Amount of jitter in a channel through which received value is transmitted, is estimated based on which a boundary (97) is moved to enlarge the spaces containing large amount of jitter.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) viterbi detector;
- (2) mask data storage device; and
- (3) jitter noise compensation method.

USE - For disk drive.

ADVANTAGE - Enables developing hardware containing efficient and reliable jitter dominant channel detection scheme.

DESCRIPTION OF DRAWING(S) - The figure shows a portion of the data space showing two data points.

Decode values (90,92)

Boundary (97)

pp; 15 DwgNo 4/11

Title Terms: RECEIVE; VALUE; DECODE; METHOD; DISC ; DRIVE; ESTIMATE; AMOUNT; JITTER; CHANNEL; THROUGH; RECEIVE; VALUE; TRANSMIT; BASED; BOUNDARY; MOVE; ENLARGE; SPACE; CONTAIN; AMOUNT; JITTER

Derwent Class: T03; U21; W01

International Patent Class (Main): H03M-013/03

File Segment: EPI

8/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

014969102 **Image available**
WPI Acc No: 2003-029616/200302
XRPX Acc No: N03-023447

Intradiscal lesioning apparatus has probe whose distal portion is provided with heating coils that emit energy when distal portion is in deployed configuration

Patent Assignee: BAYLIS F H (BAYL-I); LEUNG M (LEUN-I); SHAH K (SHAH-I)

Inventor: BAYLIS F H ; LEUNG M ; SHAH K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020147444	A1	20021010	US 2001827922	A	20010409	200302 B

Priority Applications (No Type Date): US 2001827922 A 20010409

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20020147444	A1	22	A61B-018/04	

Abstract (Basic): US 20020147444 A1

NOVELTY - A probe (6) is inserted through the bore of an introducer (5) that provides external surgical access to the nucleus pulposus (3) when inserted through the annulus fibrosus (4). The distal portion (9) of the probe forms at least one loop that remains within the nucleus pulposus without contacting the inner wall, and has heating coils that emit energy when the distal portion is in the deployed configuration.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for percutaneous treatment of a patient's intervertebral disc .

USE - For treating intervertebral disc disorders such as localized tears or fissures in annulus fibrosus, localized disc herniations, and circumferential bulging of discs .

ADVANTAGE - Delivers sufficient energy to annulus fibrosus to achieve either or both enervation and modification of collagen fibrils with predictable accuracy. Can be accurately positioned within any portion of nucleus pulposus of any lumbar intervertebral disc having variable shape, to deliver energy to any selected area of annulus fibrosus. Can adopt varying configurations within nucleus pulposus to deliver targeted energy to any selected area of annulus fibrosus. Heating coils can be positioned in close proximity to inner wall of annulus fibrosus, without entirely depending on physical contact with inner wall of annulus fibrosus, thereby enabling heating coils to adopt selected configuration.

DESCRIPTION OF DRAWING(S) - The figure is the sectional view through an intervertebral disc , and shows the insertion of an introducer with a probe initially entering the nucleus pulposus.

Nucleus pulposus (3)

Annulus fibrosus (4)

Introducer (5)

Probe (6)

Distal portion (9)

pp; 22 DwgNo 2/23

Title Terms: APPARATUS; PROBE; DISTAL; PORTION; HEAT; COIL; EMIT; ENERGY;

DISTAL; PORTION; DEPLOY; CONFIGURATION

Derwent Class: P31

International Patent Class (Main): A61B-018/04

International Patent Class (Additional): A61B-018/18

File Segment: EngPI

8/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

014445251 **Image available**
WPI Acc No: 2002-265954/200231
XRPX Acc No: N02-206526

Parity signal insertion circuit for write precoders in magnetic storage disk drives, uses parity bit insertion after data stream precoding

Patent Assignee: TEXAS INSTR INC (TEXI)
Inventor: FU L; JEON T; LEUNG M ; MCCLELLAN B
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6282690	B1	20010828	US 99231480	A	19990114	200231 B

Priority Applications (No Type Date): US 99231480 A 19990114

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6282690	B1		8 G06F-011/00	

Abstract (Basic): US 6282690 B1

NOVELTY - The parity bit insertion circuit (103) has a data stream precoder (110), a parity circuit (108) that generates a parity signal based on the precoded data at a predetermined time and an insertion circuit (100) that inserts the parity signal into the data stream. The precoder circuit includes a feedback loop (104) of the insertion circuit output. The parity signal is inserted after the data stream is precoded.

USE - For use in error detection when writing high density data to magnetic disks.

ADVANTAGE - The circuit inserts a parity bit in an run length limited (RLL) code using feedback in the write precoder which maintains the binary mapped data (called D, K/I sequences) into constrained sequences. The circuit does not require the need of clock gapping on the precoder side of the parity insertion circuit. The circuit also reduces the length of the error event and solves uncorrected data problems at the codeword boundaries by inserting the parity bit after the precoder and removing it before the postcoder.

DESCRIPTION OF DRAWING(S) - The diagram represents a write precoder and parity bit insertion circuit with feedback.

Insertion circuit (100)
Parity bit insertion circuit (103)
Feedback loop (104)
Parity circuit (108)
Data stream decoder (110)
pp; 8 DwgNo 1/6

Title Terms: PARITY; SIGNAL; INSERT; CIRCUIT; WRITING; MAGNETIC; STORAGE; DISC ; DRIVE; PARITY; BIT; INSERT; AFTER; DATA; STREAM

Derwent Class: T01; T03; U21

International Patent Class (Main): G06F-011/00

International Patent Class (Additional): G11C-029/00; H03M-013/00; H03M-013/03

File Segment: EPI

8/5/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

014341993 **Image available**
WPI Acc No: 2002-162696/200221
XRPX Acc No: N02-124082

Parity insertion circuit for use in magnetic disk drives, has precoder including a feedback loop, based on output of multiplexer inserting

parity bit into precoded data stream

Patent Assignee: TEXAS INSTR INC (TEXI)

Inventor: FU L; JEON T; LEUNG M ; MCCLELLAN B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6243847	B1	20010605	US 98215982	A	19981218	200221 B

Priority Applications (No Type Date): US 98215982 A 19981218

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6243847	B1		10	G06F-011/10	

Abstract (Basic): US 6243847 B1

NOVELTY - A precoder (110) pre-codes the input data stream. A parity check circuit (108) generates parity bit based on precoded data stream at predetermined time. A multiplexer (100) inserts parity bit into precoded data stream. The precoder includes a feedback loop based on output of multiplexer.

USE - For use in magnetic disk drives.

ADVANTAGE - The feedback loop included based on output of multiplexer allows operation of inserting parity bit into precoded data stream without clock gapping.

DESCRIPTION OF DRAWING(S) - The figure shows the write precoder and parity insertion circuit without feedback.

Multiplexer (100)

Parity check circuit (108)

Precoder (110)

pp; 10 DwgNo 1/11

Title Terms: PARITY; INSERT; CIRCUIT; MAGNETIC; DISC ; DRIVE; FEEDBACK; LOOP; BASED; OUTPUT; MULTIPLEX; INSERT; PARITY; BIT; DATA; STREAM

Derwent Class: T01; T03; U21

International Patent Class (Main): G06F-011/10

File Segment: EPI

8/5/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

012943867 **Image available**

WPI Acc No: 2000-115720/200010

XRFX Acc No: N00-087584

Phase interpolation circuit for fractional phase interpolation of ring oscillator for high resolution pre-compensation

Patent Assignee: TEXAS INSTR INC (TEXI)

Inventor: CHIU K; LEUNG M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6009534	A	19991228	US 9888551	A	19980601	200010 B

Priority Applications (No Type Date): US 9888551 A 19980601

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6009534	A		16	G06F-001/00	

Abstract (Basic): US 6009534 A

NOVELTY - The phase interpolation circuit fractional interpretation circuit is used to correct pre-write compensation for writing data on disc . A pre-compensation delay is generated in the path of a write

data stream.

DETAILED DESCRIPTION - The Phase interpolation circuit triples the resolution of the phases, and can be switched to provide pre-compensation at high data rates. The circuit uses a ramp generator with a switchable gain or slew rate of either 2 or 1, and achieves variable gain by increasing or decreasing current paths, by switching the slew rate of a programmable ramp generator to either a normalized value of 1 or 2. The output of a ring oscillator is connected to a 6 to 2 phase multiplexer, and each of the phases are input to a switchable 3X phase interpolator, which is output to a write precompensation clock circuit. INDEPENDENT CLAIMS are included for; a system for precompensation; a method for providing a phase interpolation signal.

USE - In three phase interpreter used to correct pre-write compensation for writing data to magnetic medium, and for generating precompensation delay in the path of a write data stream.

ADVANTAGE - Triples resolution of phases.

DESCRIPTION OF DRAWING(S) - The drawing shows a 3X phase interpolator circuit.

Interpolation circuit (800)
Ramp generators (802,804)
Selector circuits (806,812)
Amplifiers (808,810)
Summing circuit (814)
Comparator (816)
Precompensation clock circuit (730)
pp; 16 DwgNo 8/12

Title Terms: PHASE; INTERPOLATION; CIRCUIT; FRACTION; PHASE; INTERPOLATION; RING; OSCILLATOR; HIGH; RESOLUTION; PRE; COMPENSATE

Derwent Class: T01; U22

International Patent Class (Main): G06F-001/00

File Segment: EPI

8/5/6 (Item 6 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

012913585 **Image available**

WPI Acc No: 2000-085421/200007

XRPX Acc No: N00-066950

Disk drive controller for personal computer

Patent Assignee: INTEL CORP (ITLC)

Inventor: LEUNG V K; SHAH K A ; VOLK A M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5996027	A	19991130	US 92993372	A	19921218	200007 B
			US 95572578	A	19951214	

Priority Applications (No Type Date): US 92993372 A 19921218; US 95572578 A 19951214

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5996027	A	14	G06F-013/10	Cont of application US 92993372

Abstract (Basic): US 5996027 A

NOVELTY - Based on pre compensation, data rate and magnetic storage density information stored in register (203), a configuring unit configures interface which provides control signals to magnetic disk. Interfaces are configured upon execution of specification command being protected from a software reset.

DETAILED DESCRIPTION - The configuring unit comprises drive specification command transmitted during initial configuration step and encoded on one or more control signals. The register stores the information indicative of separate interface requirements of the corresponding separate magnetic recording system, and information specifying a boot-up disk drive. The specification command is written in the register during power-on, self-test routine of a basic input/output system program executed by computer system. An INDEPENDENT CLAIM is also included for method of interfacing a magnetic storage system to computer system.

USE - For personal computer.

ADVANTAGE - Provides disk drive controller configured to support different disk drives having different interfacing schemes. Programming by basic input/output system eliminates the need for application software to know anything of computer system beyond the basics. Allows disk drive controller to be compatible with a wide variety of different disk drive types without increasing pin count nor utilizing external hardware.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram illustrating the implementation of virtual drive designations.

Register (203)

pp; 14 DwgNo 3/5

Title Terms: DISC ; DRIVE; CONTROL; PERSON; COMPUTER

Derwent Class: T01; T03

International Patent Class (Main): G06F-013/10

File Segment: EPI

8/5/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

009449704

WPI Acc No: 1993-143229/199317

XRPX Acc No: N93-109231

Simultaneous interleaved accessing of memory banks and circuit thereof -
using multiplexers controlled by sequencing control circuits to couple
each memory is coupled to each port in sequence and in repeating cycle

Patent Assignee: MICRO TECHNOLOGY INC (MICR-N)

Inventor: ASATO E E; GLIDER J S; SHAH K S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5202856	A	19930413	US 90505297	A	19900405	199317 B

Priority Applications (No Type Date): US 90505297 A 19900405

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5202856	A		14	G11C-013/00	

Abstract (Basic): US 5202856 A

Multiplexing logic circuit couples each of the ports of the multiple part system to each of the memories of the memory bank (multiple memory system), and a sequencing circuit controls the multiplexers so that each part is sequentially coupled to each of the memories in sequence in a repeating cycle.

When coupled to each memory, block of data is transferred, and second part is coupled to a different memory at each time, with two parts being switched simultaneously to avoid overlap. A part queues for accessing the system in a switching queue so that it can transfer in lock-step with other parts to a different memory.

The circuit includes computer system (13) (external) which can access staging memory in **disc** drive control system (15) over bus (19) or (21) through external computer interface while the **disc** drives can access staging memory over bus (24) at the same time - using memory as buffer.

In the example using memory banks (12,14,16,18) data buses (20,22) are coupled to parts (25) and (27) respectively with a third data bus (24) coupled to part (29) through a FIFO circuit (26). Each part can be coupled to any memory banks so that all three parts can be accessing different memory banks at one time. Read/write and arbitration control circuit provides control signals to various memory banks on an enable signal received from each part.

USE - In data processors with multiple async. processors, storage control and management systems, as means of arranging memory for several users accessing at same time without interfering with each other.

Dwg.1B/5B

Title Terms: SIMULTANEOUS; INTERLEAVED; ACCESS; MEMORY; BANK; CIRCUIT;
MULTIPLEX; CONTROL; SEQUENCE; CONTROL; CIRCUIT; COUPLE; MEMORY; COUPLE;
PORT; SEQUENCE; REPEAT; CYCLE

Derwent Class: U14

International Patent Class (Main): G11C-013/00

File Segment: EPI

Set	Items	Description
S1	19	E3,E7,E8
S2	65	AU='SHAH K':AU='SHAH K N'
S3	30	AU='SHAH K R':AU='SHAH K V'
S4	1	AU='BAYLIS F H'
S5	109	S1:S4
S6	7	S5 AND DISC? ?
S7	7	IDPAT (sorted in duplicate/non-duplicate order)
S8	7	IDPAT (primary/non-duplicate records only)

? show files

File 347:JAPIO Oct 1976-2003/Jan(Updated 030506)

(c) 2003 JPO & JAPIO

File 348:EUROPEAN PATENTS 1978-2003/Apr W04

(c) 2003 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20030515,UT=20030508

(c) 2003 WIPO/Univentio

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200332

(c) 2003 Thomson Derwent

File 371:French Patents 1961-2002/BOPI 200209

(c) 2002 INPI. All rts. reserv.

B.61.0
patents

9/5/1 (Item 1 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

015029571
WPI Acc No: 2003-090088/200308
XRAM Acc No: C03-022725
XRPX Acc No: N03-071112

Changing acoustic reflectivity of ultrasound target for monitoring the temperature of a tissue in a patient, comprises administering a nongaseous acoustic imaging substance

Patent Assignee: HALL C S (HALL-I); LANZA G M (LANZ-I); WICKLINE S A (WICK-I); BARNES-JEWISH HOSPITAL (BARN-N)

Inventor: HALL C S; LANZA G M; WICKLINE S A

Number of Countries: 100 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020102216	A1	20020801	US 2001774278	A	20010130	200308 B
WO 200260524	A2	20020808	WO 2002US2631	A	20020130	200308

Priority Applications (No Type Date): US 2001774278 A 20010130

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

US 20020102216	A1		25	A61K-049/00	
----------------	----	--	----	-------------	--

WO 200260524	A2 E			A61N-000/00	
--------------	------	--	--	-------------	--

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

Abstract (Basic): US 20020102216 A1

NOVELTY - Changing (M1) acoustic reflectivity of an **ultrasound** target, comprises:

- (a) administering to the target, a nongaseous acoustic imaging substance (I) which binds to the target and produces a change in acoustic reflectivity with a change in temperature; and
- (b) changing the temperature to produce a measurable change in acoustic reflectivity of (I) bound to the target

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) measuring (M2) enhanced acoustic reflectivity of an **ultrasound** target, comprising:

- (a) administering (I) to the target;
- (b) changing the temperature to produce a measurable change in acoustic reflectivity of (I) bound to the target; and
- (c) detecting a change in acoustic reflectivity of the bound substance;

(2) monitoring (M3) the temperature of a tissue in a patient, comprising:

- (a) administering (I) to the patient;
- (b) detecting acoustic reflectivity of (I) bound to the tissue; and
- (c) calculating temperature of (I) bound to the tissue; and
- (3) a device (II) for measuring changes in temperature of a target having a temperature sensitive acoustic imaging substance bound to it, comprising:

- (i) a component configured to change the temperature of the acoustic imaging substance;

(ii) an **ultrasound** source configured to transmit acoustic energy to the target;

(iii) an **ultrasound** detecting component configured to measure acoustic reflectivity of the surface; and

(iv) a comparator which determines acoustic reflectivity of the target upon changing temperature relative to acoustic reflectivity of the target in absence of changing temperature.

USE - The method is used for changing the acoustic reflectivity of an **ultrasound** target. (I) is used to measure enhanced acoustic reflectivity of an **ultrasound** target. (I) is used to monitor the temperature of a tissue in a patient (claimed).

ADVANTAGE - (M1) enhances detection of acoustic reflectivity of an **ultrasound** target (claimed).

pp; 25 DwgNo 0/7

Title Terms: CHANGE; ACOUSTIC; REFLECT; **ULTRASONIC** ; TARGET; MONITOR; TEMPERATURE; TISSUE; PATIENT; COMPRISE; ADMINISTER; ACOUSTIC; IMAGE; SUBSTANCE

Derwent Class: B04; D16; P34; S03; S05

International Patent Class (Main): A61K-049/00; A61N-000/00

International Patent Class (Additional): A61K-048/00

File Segment: CPI; EPI; EngPI

9/5/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

013991576 **Image available**

WPI Acc No: 2001-475791/200151

XRPX Acc No: N01-352188

Intervertebral disc treating apparatus for medical application, has cannula with sufficient rigidity to advance within annulus fibrous of intervertebral disc in response to axial force exerted on proximal end

Patent Assignee: SHERWOOD SERVICES AG (SHES)

Inventor: COSMAN E; FINCH P P M

Number of Countries: 074 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200145579	A1	20010628	WO 2000US34139	A	20001218	200151 B
AU 200122691	A	20010703	AU 200122691	A	20001218	200164
EP 1239787	A1	20020918	EP 2000986453	A	20001218	200269
			WO 2000US34139	A	20001218	

Priority Applications (No Type Date): US 99171822 P 19991221

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200145579 A1 E 22 A61B-018/14

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200122691 A A61B-018/14 Based on patent WO 200145579

EP 1239787 A1 E A61B-018/14 Based on patent WO 200145579

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU LV MC MK NL PT RO SE SI TR

Abstract (Basic): WO 200145579 A1

NOVELTY - **Thermal probe** (16) defines proximal and distal ends and has **cannula** (1) adjacent to distal end. The **cannula** has

sufficient rigidity to advance within annulus fibrous of intervertebral **disc** relative to axial force exerted on proximal end while having sufficient flexibility to substantially follow and conform to azimuthal course defined by natural striata of annulus fibrous. The **probe** provides **thermal** energy to the fibrous to alleviate pain associated with intervertebral **disc**.

USE - For medical application for alleviating back pains.

ADVANTAGE - Enables to place a **cannula** in posterior or posterior lateral portion of **disc**, since **cannula** is curved and is sufficiently rigid to advance within annulus fibrous. Enables surgeon to get additional information on positioning of **cannula** and enables to receive indication of degree of desiccation, power rise, boiling or charring, that take place near electrode, by monitoring **impedance** of **cannula** and **thermal probe** as it is positioned within **disc**. Enables simple, minimally invasive, percutaneous, out-patient treatment of interdiscal pain without the need for open surgery e.g. discectomies or spinal stabilization using plates, screws and other instrumentation hardware.

DESCRIPTION OF DRAWING(S) - The figure shows the intervertebral **disc** treating apparatus.

Cannula (1)

Thermal probe (16)

pp; 22 DwgNo 1/3

Title Terms: INTERVERTEBRAL; **DISC**; TREAT; APPARATUS; MEDICAL; APPLY;
CANNULA; SUFFICIENT; RIGID; ADVANCE; ANNULAR; FIBRE; INTERVERTEBRAL;
DISC; RESPOND; AXIS; FORCE; EXERT; PROXIMITY; END

Derwent Class: P31; S03; S05

International Patent Class (Main): A61B-018/14

File Segment: EPI; EngPI

9/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

002296939

WPI Acc No: 1980-A3371C/198002

Level indication system for reservoirs - has electric impedance sensitive detection probe formed by clamped rod with coaxial conducting discs

Patent Assignee: SCHWEIZERISCHE ALUM (SWAL)

Number of Countries: 004 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
NL 7904605	A	19791218				198002 B
DE 2829857	A	19800430				198019
DE 2829857	C	19820624				198226
CH 632089	A	19820915				198241
IT 1121093	B	19860326				198729

Priority Applications (No Type Date): CH 786525 A 19780615

Abstract (Basic): NL 7904605 A

The level detection **probe** consists of two concentric **tubes** (31-33) of insulating material. The **probe** is divided by coaxial **discs** of conducting material (37a-37n) with a larger diameter than the outer **tube**. Resistances (R1-Rn) are series connected between the rings within the annular spaces (35) which are filled with insulating material (41).

The assembly is clamped together via a steel rod (45) terminated at

a **disc** (47) and a nut (49). **Electrical** connection of both AC and DC types can be made to the steel rod and upper resistance at and connected to an ammeter connected in series with the supply. Depending on the depth (5) of immersion the medium (1) to be detected causes changes in **impedance** proportional to the number of segments with which the medium forms a parallel **impedance** thus reducing the overall **impedance** and increasing current flow. When the conductivity of the medium is known, the increase or decrease in current will reflect level changes on a suitable calibrated ammeter.

Title Terms: LEVEL; INDICATE; SYSTEM; RESERVOIR; **ELECTRIC** ; **IMPEDANCE** ;
SENSITIVE; DETECT; **PROBE** ; FORMING; CLAMP; ROD; COAXIAL; CONDUCTING;
DISC

Derwent Class: S02

International Patent Class (Additional): G01F-023/24

File Segment: EPI

Set	Items	Description
S1	364813	DISC? ? OR (ANNULUS OR ANULUS OR ANULI OR ANNULI) (2N) PULPO-
		S?
S2	115637	PROBE? ?
S3	4735544	ELECTRIC? OR MICROWAVE? ? OR ULTRASOUND? ? OR ULTRASONIC? - OR ULTRA() (SOUND OR SONIC? ?) OR THERMAL OR HEAT??? OR CRYOGE- N? OR COOL???
S4	866577	CATHETHER? ? OR CATHETER? ? OR CANNULA? OR TUBE? ? OR TUBI- NG? ? OR INTRODUCER? ?
S5	82908	IMPEDANC?
S6	82925	S5 OR BIOIMPEDANC?
S7	3	S6 AND S1 AND S2 AND S3 AND S4
S8	3	IDPAT (sorted in duplicate/non-duplicate order)
S9	3	IDPAT (primary/non-duplicate records only)

? show files

File 347:JAPIO Oct 1976-2003/Jan(Updated 030506)
(c) 2003 JPO & JAPIO

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200332
(c) 2003 Thomson Derwent

File 371:French Patents 1961-2002/BOPI 200209
(c) 2002 INPI. All rts. reserv.

FT Patents

11/5,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2003 European Patent Office. All rts. reserv.

01575553

High efficiency electrosurgery probe

PATENT ASSIGNEE:

Electrosurgery Associates, LLC, (4202330), 6408 Needle Leaf Drive,
Rockville, MD 20852, (US), (Applicant designated States: all)

INVENTOR:

Carmel, Yuval, 6408 Needle Leaf Drive, Rockville, Maryland 20852, (US)
Shkvarunets, Anatoly, 13001 Crookstone Lane, Apt. 32, Rockville, Maryland
, (US)

LEGAL REPRESENTATIVE:

Siniscalco, Fabio et al (63051), Jacobacci & Partners S.p.A. Via Senato,
8, 20121 Milano, (IT)

PATENT (CC, No, Kind, Date): EP 1308136 A1 -030507 (Basic)

APPLICATION (CC, No, Date): EP 2002079486 021028;

PRIORITY (CC, No, Date): US 330918 P 011102; US 226280 020823

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;
IE; IT; LI; LU; MC; NL; PT; SE; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: **A61B-018/14**

ABSTRACT EP 1308136 A1

A high efficiency electrosurgical electrode with an advanced metallic tip and insulator design, and a method of conducting an electrosurgical procedure with such electrode are disclosed. The electrosurgical electrode comprises a metallic body portion of various geometries, a metallic tip and a dielectric insulator adjacent the metallic body portion. The metallic tip comprises a plurality of metallic protuberances of various forms and geometries, which are separated by a plurality of grooves, also of various geometries. The plurality of grooves may be filled with a dielectric material to form various flat dielectric regions surrounding the plurality of metallic protuberances.

ABSTRACT WORD COUNT: 99

NOTE: Figure number on first page: 3

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 030507 A1 Published application with search report

LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION Electrosurgical procedures typically rely on the application of very high frequency or radio frequency (RF) **electrical** power to cut, ablate or coagulate tissue structures. For example, electrosurgery cutting entails **heating** tissue cells so rapidly that they explode into steam leaving a cavity in the cell...

...During...suited characteristics will require higher powers levels than those with efficient designs and appropriate generators. **Probes** used in electrosurgery have relatively large area of metallic electrode, which is the active area of the **probe**. Large electrode area decreases the **probe impedance** and, therefore, increases the RF power required for proper operation. The shape of the dielectric...

...electrosurgical electrodes.

As illustrated in Figure 1, the monopolar electrosurgical system 10

includes an electrosurgical **probe** 20 that is connected to receptacle 34 of the electrosurgical power supply 11 by conductor cable 22. The electrosurgical **probe** 20 comprises a connector housing 44 at its proximal end, and an electrosurgical electrode 100 be a **tube** or a narrow-diameter rod of dimensions that permit the distal active electrode 80 to be introduced through an associated **cannula** in a minimally invasive procedure, such as arthroscopic or other endoscopic procedures, or into a...

...and tendon debridement as applied to any of the synovial joints of the body; inducing **thermal** shrinkage of joint capsules as a treatment for recurrent dislocation, subluxation or repetitive stress injury to any articulated joint of the body; discectomy either in the treatment of **disc** prolapse or as part of a **spinal** fusion via a posterior or anterior approach to the cervical, thoracic and lumbar **spine** or any other fibrous joint for similar purposes; excision of diseased tissue and haemostasis, among...

11/5,K/2 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

01000587

ELECTROSURGICAL APPARATUS AND METHODS FOR CUTTING TISSUE

Patent Applicant/Assignee:

ARTHROCARE CORPORATION, 680 Vaqueros Avenue, Sunnyvale, CA 94085, US, US
(Residence), US (Nationality)

Inventor(s):

CIARROCCA Scott A, 4 Myers Lane, Stockton, NJ 08559, US,
ANTOUNIAN Francois, 2364 North Point, San Francisco, CA 94123, US,
WOLOSZKO Jean, 1694 Columbia Drive, Mountain View, CA 94040, US,
DAHLA Robert H, 1227 Valerian Court, #3, Sunnyvale, CA 94086, US,

Legal Representative:

BAGADE Sanjay S (agent), ArthroCare Corporation, 680 Vaqueros Avenue,
Sunnyvale, CA 94085, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200328540 A2 20030410 (WO 0328540)

Application: WO 2002US31409 20021002 (PCT/WO US0231409)

Priority Application: US 2001326664 20011002; US 200282017 20020225

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU

CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP

KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO

RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: **A61B**

Publication Language: English

Filing Language: English

English Abstract

The present invention provides systems, apparatus, and methods for dissecting, resecting, severing, cutting, contracting, coagulating, or otherwise modifying a tissue or organ of a patient. An apparatus of the invention includes an electrosurgical **probe** configurable between an open configuration and a closed configuration, the **probe** including an active electrode terminal, a fixed return electrode disposed proximal to

the active electrode terminal, and a movable return electrode configured to move linearly with respect to the active electrode terminal between the open configuration and the closed configuration. A method of the present invention comprises clamping a blood vessel between the active electrode terminal and the movable return electrode, coagulating the clamped blood vessel by application of a first high frequency voltage, and severing the coagulated blood vessel by application of a second high frequency voltage.

Legal Status (Type, Date, Text)

Publication 20030410 A2 Without international search report and to be republished upon receipt of that report.

Detailed Description

... respect to the active electrode. The present invention still further relates to a laparoscopic electrosurgical **probe** adapted for cutting, coagulation, and blunt dissection of tissue during laparoscopic procedures.

Conventional electrosurgical instruments...by creating a voltage difference between the active electrode and the target tissue, causing an **electrical** arc to form across the physical gap between the electrode and the tissue. At the point of contact of the **electric** arcs with the tissue, rapid tissue **heating** occurs due to high current density between the electrode and the tissue. This high current...

...In addition, since the defined path through the patient's body has a relatively high **electrical impedance**, large voltage differences must typically be applied between the return and active electrodes in order less **impedance** than the defined **electrical** path, which will substantially increase the current flowing through these paths, possibly causing damage to...electrodes generates the danger that the current will short across the electrodes, possibly impairing the **electrical** control system and/or damaging or destroying surrounding tissue...

According to one aspect of the invention, the **electrically** insulating **tube** comprises a multi-lumen plastic **tube** formed by an extrusion process. Such a multi-lumen plastic **tube** may accommodate an aspiration lumen for proximal passage of an aspiration stream, a fluid delivery lumen for delivery of **electrically** conductive fluid to the working end of the **probe**, as well as lumina for active and return electrode filaments or leads.

An electrosurgical **probe** of the invention may be provided in various configurations, for example, according to a particular...

...**spinal** and neurologic procedures, oncology, and the like.

11/5,K/3 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00996357

ELECTROSURGICAL APPARATUS AND METHODS FOR TISSUE TREATMENT & REMOVAL

Patent Applicant/Assignee:

ARTHROCARE CORPORATION, 680 Vaqueros Avenue, Sunnyvale, CA 94085, US, US
(Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

DAHLA Robert H, 787 N. Fair Oaks Avenue, #2, Sunnyvale, CA 94086, US, US
(Residence), US (Nationality), (Designated only for: US)
WOLOZCO Jean, 1694 Columbia Drive, Mountain View, CA 94040, FR, FR
(Residence), FR (Nationality), (Designated only for: US)

Legal Representative:

BAGADE Sanjay S (agent), ArthroCare Corporation, 680 Vaqueros Avenue,
Sunnyvale, CA 94085, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200324305 A2 20030327 (WO 0324305)

Application: WO 2002US29476 20020916 (PCT/WO US0229476)

Priority Application: US 2001322243 20010914

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU
CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO
RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B

Publication Language: English

Filing Language: English

English Abstract

Systems, apparatus, and methods for ablating, sculpting, severing, shrinking, coagulating, or otherwise modifying a target tissue to be treated. In a method for treating a target tissue, an active electrode terminal of an electrosurgical **probe** is positioned in at least close proximity to the target tissue. A high frequency voltage is then applied between the active electrode and a return electrode, wherein, the high frequency voltage is sufficient to volumetrically remove (ablate), sever, or modify at least a portion of the target tissue. The **probe** comprises an electrode assembly including an electrode support and at least one active electrode terminal arranged within the electrode support, the electrode support having a suction cavity, and each active electrode terminal having an electrode lumen therein, the electrode lumen in communication with the suction cavity. Unwanted materials may be aspirated from a surgical site via the electrode lumen.

Legal Status (Type, Date, Text)

Publication 20030327 A2 Without international search report and to be republished upon receipt of that report.

Detailed Description

... to a vacuum source. This invention further relates to an electrode assembly for an electrosurgical **probe**, the electrode assembly including an electrode support having a suction cavity therein. This invention still further relates to an electrosurgical **probe** having an integral aspiration unit, the aspiration unit comprising an electrode lumen within an electrode terminal of the **probe**.

Conventional electrosurgical methods are widely used since they generally reduce patient bleeding associated with tissue...

...improve the surgeon's visibility. These traditional electrosurgical techniques for treatment have typically relied on **thermal** methods to rapidly **heat** and vaporize liquid within tissue and to cause cellular

destruction. In conventional monopolar electrosurgery, for example, electric current is directed along ...addition, since the defined path through the patient's body has a relatively high electrical impedance, large voltage differences must typically be applied between the active and return electrodes to generate...

...a patient. In one embodiment, a method of the present invention comprises positioning an electrosurgical probe or catheter adjacent the target site so that one or more active electrode(s) are brought into contact with, or close proximity to, a target tissue in the presence of electrically conductive fluid...

... diskectomy procedures for treating herniated disks, decompressive laminectomy for stenosis in the lumbosacral and cervical spine, medial facetectomy, posterior lumbosacral and cervical spine fusions, treatment of scoliosis associated with vertebral disease, foraminotomies to remove the roof of the...cardiology procedures, urology, laparoscopy, arthroscopy, thoracoscopic or other cardiac procedures, cosmetic surgery, orthopedics, gynecology, otorhinolaryngology, spinal and neurologic procedures, oncology and the like.

11/5,K/4 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00968569 **Image available**

ELECTROSURGICAL APPARATUS AND METHODS FOR TREATMENT AND REMOVAL OF TISSUE

Patent Applicant/Assignee:

ARTHROCARE CORPORATION, 680 Vaqueros Avenue, Sunnyvale, CA 94085, US, US
(Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

DAHLA Robert H, 787 N. Fair Oaks Avenue #2, Sunnyvale, CA 94086, US, US
(Residence), US (Nationality), (Designated only for: US)

WOLOSZKO Jean, 1694 Columbia Drive, Mountain View, CA 94040, US, US
(Residence), FR (Nationality), (Designated only for: US)

Legal Representative:

BAGADE Sanjay S (agent), ArthroCare Corporation, 680 Vaqueros Avenue,
Sunnyvale, CA 94085, US;

Patent and Priority Information (Country, Number, Date):

Patent: WO 2002102255 A1 20021227 (WO 02102255)

Application: WO 2002US19261 20020618 (PCT/WO US0219261)

Priority Application: US 2001299094 20010618; US 200268533 20020205

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU

CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP

KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO

RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-017/20

Publication Language: English

English Abstract

Apparatus and methods for ablating, severing, cutting, shrinking, coagulating, or otherwise modifying a target tissue to be treated. In a

method for treating a target tissue, an active electrode of an electrosurgical **probe** (20) is positioned in at least close proximity to the target tissue in the presence of an **electrically** conductive fluid. A high frequency voltage is then applied between the active electrode (203) and a return electrode (112), wherein, the high frequency voltage is sufficient to volumetrically remove (ablate), sever, or modify at least a portion of the target tissue. The **probe** (20) comprises a multi-lumen shaft having a plurality of internal lumens, and a return electrode coil oriented substantially parallel to the shaft distal end. The active electrode (203) may be in the form of a metal **disc**, a hook, or an active electrode coil. In the latter embodiment, the active electrode coil (203) is typically arranged substantially orthogonal to the return electrode coil. Methods of making an active electrode coil, a return electrode coil, and an electrosurgical **probe** are also disclosed.

Legal Status (Type, Date, Text)

Publication 20021227 A1 With international search report.

Detailed Description

... an open structure which defines an axial space. This invention further relates to an electrosurgical **probe** having a multi-lumen extruded shaft. This invention still further relates to an electrosurgical **probe** having a **disc**-like active electrode head.

Conventional electrosurgical methods are widely used since they generally reduce patient on **thermal** methods to rapidly **heat** and vaporize liquid within tissue and to cause cellular destruction. In conventional monopolar electrosurgery, for example, **electric** current is directed along a defined path from the exposed or active electrode through the...

11/5,K/6 (Item 5 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT.

(c) 2003 WIPO/Univentio. All rts. reserv.

00886259 **Image available**

APPARATUS FOR AND TREATMENT OF THE INTERVERTEBRAL DISC

Patent Applicant/Assignee:

SHERWOOD SERVICES AG, Schwartstrasse 9, CH-8200 Schaffhausen, CH, CH
(Residence), CH (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

FREDERICKS Raymond, 4 Lisa Drive, Nashua, NH 03052, US, US (Residence),
US (Nationality), (Designated only for: US)

SHANAHAN John P, 16 Dutton Circle, Medford, MA 02155, US, US (Residence),
US (Nationality), (Designated only for: US)

Legal Representative:

DENNINGER Douglas E (agent), U.S. States Surgical, a division of Tyco
Healthcare Group LP, 150 Glover Avenue, Norwalk, CT 06856, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200219933 A1 20020314 (WO 0219933)

Application: WO 2000US34140 20001218 (PCT/WO US0034140)

Priority Application: US 2000230750 20000907

Designated States: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB
GD GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ
PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-018/14

Publication Language: English

Filing Language: English

English Abstract

A system and method for approaching the intervertebral **disc** through a percutaneous insertion from the of a patient for **thermal** or electromagnetic treatment of an intervertebral **disc**, includes an elongated **probe** member (104) having a guidable region (128) adjacent its distal end with an undulating groove (130) defined in its outer region in at least one radial direction of movement relative to a longitudinal axis of the **thermal** prove. Preferably, the guidable region includes a plurality of undulating grooves (130), whereby adjacent undulating grooves are longitudinally spaced with respect to each other. The undulating grooves each define a sinusoidal configuration which may be arranged about an undulating axis extending in oblique relation to the longitudinal axis. The guidable region also includes a longitudinally extending **backbone** (132) may also include a **cannula** (102) to facilitate introduction of the **thermal probe** in the intervertebral **disc**. The **cannula** includes an arcuate end portion (110) dimensions to arranged the guidable region of the **thermal probe** at a desired orientation within the annulus fibrosis.

Legal Status (Type, Date, Text)

Publication 20020314 A1 With international search report.

Examination 20020822 Request for preliminary examination prior to end of 19th month from priority date

Detailed Description

...tissues in any body cavity or tissue locations that are accessible by percutaneous or (endoscopic **catheters** or open surgical t@chniques, and is not limited to the **disc** area. Application of the device and method in all of these oraans and tissues are...

The appararus of the present invention whl now be described. Referring now to FIGS. 1 and 2, apparatus 100 includes outer ins@erdon **cannula** 102, **thermal** or EINIF **probe** 101 which is posirionable within the cannua 102 and power source 106 which is...distal end portion 112 of shaft 108 may be left uninsulated or exposed to permit **electrical** connection (e.g., for **impedance** measuring, etc.) to or contact with the tissue as **cannula** 102 is placed in the tissue. Alternatively, exposed portion 1 I? may be connected to power source 106 to **heat** stimulate or micro- **thermal** generate to facilitate passage ffrirough the tissue. The extreme distal tip 114 of shaft 108 is preferably sharpened to facilitate penetration into the **disc** tissue, i.e., through the bone of the cortex "C" and into the annulus "A". A handle or housing 116 is connected to the proximal end of **cannula** shaft 1.08 to facilitate manipulation of cCannlula.102. Handle I 1 6 mav include...

11/5,K/7 (Item 6 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2003 WIPO/Univentio. All rts. reserv.

00877959 **Image available**

APPARATUS FOR TREATMENT OF SPINAL DISORDERS

APPAREILS POUR LE TRAITEMENT DES TROUBLES DE LA COLONNE VERTEBRALE

Patent Applicant/Assignee:

ARTHROCARE CORPORATION, 595 N. Pastoria Avenue, Sunnyvale, CA 94085-2936,
US, US (Residence), US (Nationality)

Inventor(s):

WOLOSZKO Jean, 1694 Columbia Drive, Mountain View, CA 94040, US,
SHARPS Lewis, 911 Lafayette Road, Bryn Mawr, PA 19010, US,
HOVDA David C, 1900 Miramonte Avenue, Mountain View, CA 94040, US,
ORMSBY Theodore C, 2357 Dubois Street, Milpitas, CA 95035, US,
QUACKENBUSH John J, 2441 Austin Place, Santa Clara, CA 95050, US,
MARTINI Brian, 25 Harrison Way, Menlo Park, CA 94025, US,
THAPLIYAL Hira V, 1192 Volti Lane, Los Altos, CA 94024, US,
EGGERS Philip E, 5366 Reserve Drive, Dublin, OH 43017, US,

Legal Representative:

RAFFLE John T (agent), ArthroCare Corporation, 595 N. Pastoria Avenue,
Sunnyvale, CA 94086-2936, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200211635 A1 20020214 (WO 0211635)

Application: WO 2001US15728 20010515 (PCT/WO US0115728)

Priority Application: US 2000224107 20000809; US 2000676194 20000928; US
2000679394 20001003

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ

DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ

LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG

SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-018/14

Publication Language: English

Filing Language: English

English Abstract

Apparatus and methods for advancing and retracting a medical instrument within an introducer device, wherein the instrument includes a distal tip, a distal linear portion (909), a first distal curve (924), a substantially linear inter-curve portion (925), and a second proximal curve (926). The length of the distal linear portion and the angle of the first curve determine the position of the distal tip within a lumen of the introducer device, such that the distal tip occupies a substantially central transverse location within the lumen and the distal tip avoids contact with the introducer device. The length of the inter-curve portion and the angle of the second curve determine deflection of the distal tip from a longitudinal axis of the shaft when the second curve is extended distally beyond a distal end of the introducer device. Also, methods and apparatus for treating an intervertebral disc by ablation of disc tissue are disclosed.

Legal Status (Type, Date, Text)

Publication 20020214 A1 With international search report.

Examination 20021031 Request for preliminary examination prior to end of
19th month from priority date

Detailed Description

... the cartilage and bone within the spine, and to avoid damaging nerves,

such as the **spinal** nerves and the dura mater surrounding the **spinal** cord. Lasers were initially considered ideal for **spine** surgery because lasers ablate or vaporize tissue with **heat** , which also acts to cauterize and seal the small blood vessels in the tissue. Unfortunately...

...of the target tissue. This current, however, may inadvertently flow along body paths having less **impedance** than the defined **electrical** path, which will substantially increase the current flowing through these paths, possibly causing damage to...

...sensitive or fragile components can be advanced from and retracted into a lumen of an **introducer** device while avoiding contact between the sensitive or fragile component(s) and the **introducer** device. The instant invention provides such apparatus, as is described in enabling detail hereinbelow.

...spike and a cusp. The present invention still further relates to a method for ablating **disc** tissue with an electrosurgical **probe** , wherein the **probe** includes an elongated shaft, and the shaft distal end is guided to a specific target site within a **disc** .

11/5,K/8 (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00853987 **Image available**

TISSUE DISCRIMINATION AND APPLICATIONS IN MEDICAL PROCEDURES
DISCRIMINATION TISSULAIRE ET APPLICATIONS DANS DES PROCEDURES MEDICALES

Patent Applicant/Assignee:

NUVASIVE INC, 10065 Old Grove Road, San Diego, CA 92131, US, US
(Residence), US (Nationality)

Inventor(s):

HOEY Michael F, 5733 Pond Drive, Shoreview, MN 55126, US,
STONE Corbett W, 12212 Misty Blue Court, San Diego, CA 92131, US,
FOLEY Kevin T, 2877 Keasler Circle West, Germantown, TN 38139, US,
MARINO James F, 2620 St. Tropez Place, La Jolla, CA 92037, US,

Legal Representative:

HECKADON David R (et al) (agent), Townsend and Townsend and Crew LLP, 2
Embarcadero Center, 8th Floor, San Francisco, CA 94111, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200187154 A1 20011122 (WO 0187154)

Application: WO 2001US16027 20010518 (PCT/WO US0116027)

Priority Application: US 2000205634 20000518; US 2000243465 20001025

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU

CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP

KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD

SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-005/05

Publication Language: English

Filing Language: English

English Abstract

A method and system (10) for discriminating tissue types, controlling the

level of therapy to tissue, and determining the health of a known tissue by measuring the characteristics an **electrical** signal applied to conductive element located within or by the tissue.

Legal Status (Type, Date, Text)

Publication 20011122 A1 With international search report.

Publication 20011122 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Examination 20020906 Request for preliminary examination prior to end of 19th month from priority date

Detailed Description

Systems and methods exist for determining when a **probe**, needle, **catheter** or other devices make contact with a particular tissue, e.g., US Pat. No. 5...

...for Determining Electrode/Tissue Contact". The Li patent teaches a method for determining when a **catheter** makes contact with tissue covered with an ionic liquid. The system measures the electrical **impedance** at a distal end of the **catheter** and determines tissue contact has been made when the **impedance** increases. The system does not identify the type of tissue contacted and presumes the tissue...

The present invention provides a system in which an **electrical** signal is applied to a tissue via electrodes disposed on a tissue **probe**. The **electrical** signal applied to the tissue preferably comprises a frequency variable current or voltage that is...

...soft tissue. Depending on the determination, the surgeon may continue the insertion of the pedicle **probe** or screw.

In another embodiment, the **probe** 22 may be a **cannula** to be inserted adjacent to an annulus of a patient's **spinal disc** prior to performing an annulotomy. During the insertion of the **cannula** towards the annulus, it is critical that the **cannula** not rest again a nerve along side the annulus wall. Surgeons use electromyography (EMG) equipment...

11/5,K/9 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00827108 **Image available**

**ELECTROSURGICAL SYSTEMS AND METHODS FOR REMOVING AND MODIFYING TISSUE
SYSTEMES ET PROCÉDES ELECTRO-CHIRURGICAUX POUR ENLEVEMENT ET MODIFICATION
DE TISSU**

Patent Applicant/Assignee:

ARTHROCARE CORPORATION, 595 North Pastoria Avenue, Sunnyvale, CA
94085-2936, US, US (Residence), US (Nationality)

Inventor(s):

WOLOSZKO Jean, 1694 Columbia Drive, Mountain View, CA 94040, US,
PACEK James L, 25 Riviera, Coto De Caza, CA 92679, US,
TSUJI Craig, 3419 Cadillac Drive, San Jose, CA 95117, US,
THAPLIYAL Hira V, 1192 Volti Lane, Los Altos, CA 94024, US,
EGGERS Philip E, 5366 Reserve Drive, Dublin, OH 43017, US,

Legal Representative:

RAFFLE John T (agent), ArthroCare Corporation, 595 North Pastoria Avenue,
Sunnyvale, CA 94085-2936, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200160273 A1 20010823 (WO 0160273)
Application: WO 2001US4647 20010213 (PCT/WO US0104647)
Priority Application: US 2000182751 20000216; US 2001771299 20010125; US
2001780745 20010209

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-018/18

Publication Language: English

Filing Language: English

English Abstract

The present invention provides systems, apparatus and methods for selectively applying **electrical** energy to body tissue in order to ablate, contract, coagulate, or otherwise modify a tissue or organ of a patient. An electrosurgical apparatus (700) includes an electrode support (711) bearing an active electrode in the form of a plasma blade or hook (713) having an active edge and first and second blade sides (714). The first and second blade are adapted for engaging against and coagulating, the severed tissues. A method of the present invention includes positioning the apparatus adjacent to the target tissue so that that a blade- or hook-like electrode is brought near to the target tissue in the presence of an **electrically** conductive fluid. A high frequency voltage is applied between the active electrode (712) and a return electrode (718) to effect **cool** ablation of other modification of the tissue.

Legal Status (Type, Date, Text)

Publication 20010823 A1 With international search report.

Publication 20010823 A1 Before the expiration of the time limit for
amending the claims and to be republished in the
event of the receipt of amendments.

Examination 20011213 Request for preliminary examination prior to end of
19th month from priority date

Detailed Description

... by creating a voltage difference between the active electrode and the target tissue, causing an **electrical** arc to form across the physical gap between the electrode and the tissue. At the point of contact of the **electric** arcs with the tissue, rapid tissue **heating** occurs due to high current density between the electrode and the tissue. This high current ...

..attached to a suitable location on the patient. This creates the potential danger that the **electric** current will flow through undefined paths in the patient's body, thereby increasing the risk of unwanted **electrical** stimulation to portions of the patient's body. In addition, since the defined path through the patient's body has a relatively high **electrical impedance**, large voltage differences must typically be applied between the return and active electrodes in order...

...procedures, urological procedures, laparoscopy, arthroscopy, thOTacoscopy or other cardiac procedures, cosmetic surgery, orthopedics, gynecology, otorhinolaryngology, **spinal** and neurologic procedures, oncology, and the like...

11/5,K/10 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00825212 **Image available**

SURGICAL DEVICES AND METHODS FOR USE IN TISSUE ABLATION PROCEDURES

Patent Applicant/Assignee:

IOTEK INC, 1053 10th Avenue S.E., Minneapolis, MN 55414, US, US
(Residence), US (Nationality)

Inventor(s):

FOLEY Frederick J, 238 Jappa Hill Road, Bedford, NH 03110, US,
SHARROW James S, 9640 Xerxes Road, Bloomington, MN 55431, US,
REEVE Lorraine E, 6192 Webster Church Road, Dexter, MI 48130-9659, US,
ADELMAN Thomas G, 4860 High Road, West Baldwin, ME 04091-9734, US,
HOEY Michael F, 5733 Pond Drive, Shoreview, MN 55126, US, . .

Legal Representative:

SHUMAKER Steven J (agent), Shumaker & Sieffert, P.A., 150 Gateway
Corporate Center I, 576 Bielenberg Drive, St. Paul, MN 55125, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200158373 A1 20010816 (WO 0158373)

Application: WO 2001US4235 20010209 (PCT/WO US0104235)

Priority Application: US 2000181895 20000211; US 2000190411 20000317; US
2000206081 20000522; US 2000217304 20000711; US 2000649998 20000828

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ

DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ

LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG

SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: **A61B-018/14**

Publication Language: English

Filing Language: English

English Abstract

Devices and a method are provided to assist a surgeon in ablating conduction paths in tissue, such as a heart. A device can be configured to operate as a template that adheres to the tissue surface, and allows the surgeon to more easily sever the conduction path to form a lesion in a desired location. In particular, the template can be used to guide the surgeon's use of a surgical instrument along a desired ablation path. In some cases, the template may incorporate hardware that structurally supports the instrument for travel along the ablation path. A surgical instrument such as an ablation **probe**, e.g., radio frequency, laser, **ultrasonic**, **microwave**, **thermal**, chemical, mechanical, or **cryogenic** ablation **probe**, may be used to sever the conduction paths. Measurements made substantially contemporaneously with the conduction path ablation operation may be used to evaluate whether the desired degree of ablation has been achieved. The device may also incorporate feedback to compare the desired degree of conduction path ablation with the measured degree,

and may deactivate the surgical instrument when the desired degree has been achieved. In some cases, the template device can be configured to provide local stabilization of organ tissue, particularly for a moving organ such as a beating heart. In other cases, the template device may provide little or no stabilization, but provide a guide structure for placement of the ablation **probe** in the same frame of motion as the moving tissue. Also, for some applications, the template device may be arranged to facilitate application of other therapeutic devices, such as diagnostic **probes**, pacing leads, and drug delivery devices, to the surface of a moving organ.

Legal Status (Type, Date, Text)

Publication 20010816 A1 With international search report.

Publication 20010816 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Examination 20011129 Request for preliminary examination prior to end of 19th month from priority date

Detailed Description

...surgical template can be used as a guide for travel of a surgical or ablative **probe** along a path to aid a surgeon in ablation of tissue to sever conduction 1...

...procedure in terms of ablation length, depth or width. For example, the sensor may measure **electrical** characteristics of the tissue proximate the target conduction paths, e.g., tissue **impedance**, tissue conduction velocity, or tissue conduction time, as an indication of the effectiveness of the...

11/5,K/11 (Item 10 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2003 WIPO/Univentio. All rts. reserv.

00812428 **Image available**

APPARATUS FOR THERMAL TREATMENT OF AN INTERVERTEBRAL DISC
DISPOSITIF DESTINE AU TRAITEMENT THERMIQUE D'UN DISQUE INVERTEBRAL

Patent Applicant/Assignee:

SHERWOOD SERVICES AG, Schwertstrasse 9, CH-8200 Schaffhausen, CH, CH
(Residence), CH (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

FINCH Philip P M, 18 Hardy Street, South Perth, W.A. 6151, AU, AU
(Residence), AU (Nationality), (Designated only for: US)

COSMAN Eric, 872 Concord Avenue, Belmont, MA 02478, US, US (Residence),
US (Nationality), (Designated only for: US)

Legal Representative:

DENNINGER Douglas E (agent), United States Surgical, a Division of Tyco
Healthcare Group LP, 150 Glover Avenue, Norwalk, CT 06856, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200145579 A1 20010628 (WO 0145579)

Application: WO 2000US34139 20001218 (PCT/WO US0034139)

Priority Application: US 99171822 19991221

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CZ DE DK EE ES FI

GB GE HU IS JP KE KG KP LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE

SG SI SK TJ TM TR TT UA UG US UZ VN

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: **A61B-018/14**

Publication Language: English

Filing Language: English

English Abstract

An apparatus and method for treating an intervertebral **disc** having an inner nucleus pulposus and an outer annulus fibrous includes a **thermal probe** defining proximal and distal ends and having a guidable region adjacent the distal end thereof. The guidable region is characterized by having sufficient rigidity to advance within the annulus fibrous of the intervertebral **disc** in response to an axial force exerted on the proximal end of the **thermal probe** while having sufficient flexibility to substantially follow and conform to an azimuthal course defined by the natural striata of the annulus fibrous. The **thermal probe** is adapted for connection to a **thermal** energy source to provide energy to the annulus fibrous to alleviate pain associated with the intervertebral **disc**.

Legal Status (Type, Date, Text)

Publication 20010628 A1 With international search report.

Examination 20011018 Request for preliminary examination prior to end of 19th month from priority date

Detailed Description

...life. More particularly, this invention relates to a system and method for insertion of a **cannula** into the intervertebral **disc** and the insertion of a **thermal probe** into the **disc** material to **heat** the inter-vertebral **disc** thereby relieving and treating abnormalities or pain related to the **disc**.

11/5,K/12 (Item 11 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2003 WIPO/Univentio. All rts. reserv.

00793414 **Image available**

SYSTEMS AND METHODS FOR TREATING SPINAL PAIN

SYSTEMES ET METHODES DE TRAITEMENT DE LA DOULEUR SPINALE

Patent Applicant/Assignee:

ARTHROCARE CORPORATION, 595 North Pastoria Avenue, Sunnyvale, CA
94085-2936, US, US (Residence), US (Nationality)

Inventor(s):

ALLEYNE Neville, 9687 Claiborne Square, La Jolla, CA 92037, US,
HOVDA David, 1900 Miramonte Avenue, Mountain View, CA 94040, US,
THAPLIYAL Hira V, 1192 Volti Lane, Los Altos, CA 94024, US,
EGGERS Philip E, 5366 Reserve Drive, Dublin, OH 43017, US,

Legal Representative:

RAFFLE John T (agent), ArthroCare Corporation, 595 North Pastoria Avenue,
Sunnyvale, CA 94085-2936, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200126570 A1 20010419 (WO 0126570)

Application: WO 2000US28267 20001011 (PCT/WO US0028267)

Priority Application: US 99159244 19991013

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ

DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-018/14

Publication Language: English

Filing Language: English

English Abstract

The present invention provides systems (11) and methods for selectively applying **electrical** energy to a fissure or tear location within an **vertebral disc**. The present invention applies high frequency (RF) **electrical** energy to one or more active electrodes (58) in the presence of **electrically** conductive fluid to **heat** and seal a fissure on an annulus fibrosus. In one aspect of the invention, a method is provided for treating the fissure by applying sufficient **electrical** energy to the **disc** tissue to seal the fissure. In one embodiment, the RF energy is directed through the conductive fluid to **heat** the tissue immediately surrounding the fissure. The RF energy is sufficient to vaporize at least a portion of the fluid in contact with the active electrode. In another embodiment, the **electrical** current is directed through the tissue to directly **heat** the annulus tissue. This causes the annulus tissue to contract and seal the fissure. In a specific configuration, a sealant is added to the fissure to enhance the seal.

Legal Status (Type, Date, Text)

Publication 20010419 A1 With international search report.

Publication 20010419 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Examination 20011018 Request for preliminary examination prior to end of 19th month from priority date

Detailed Description

...of the target tissue. This current, however, may inadvertently flow along body paths having less **impedance** than the defined **electrical** path, which will substantially increase the current flowing through these ...

11/5,K/13 (Item 12 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

(c) 2003 WIPO/Univentio. All rts. reserv.

00773788 **Image available**

ELECTROMAGNETIC SCALPEL FOR THE HEATING OF BIOLOGICAL TISSUE
SCALPEL ELECTROMAGNETIQUE DESTINE AU CHAUFFAGE DE TISSU BIOLOGIQUE

Patent Applicant/Assignee:

NEOTONUS INC, 810A Franklin Court, Marietta, GA 30067, US, US (Residence)
, US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

DAVEY Kent R, 2275 Turnbull Bay Road, New Smyrna Beach, FL 32168, US, US
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

LANGSAM Andrew S, Levisohn, Lerner, Berger & Langsam, Suite 2400, 757

Third Avenue, New York, NY 10017, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200106943 A1 20010201 (WO 0106943)

Application: WO 2000US20441 20000727 (PCT/WO US0020441)

Priority Application: US 99145754 19990727; US 99147868 19990809

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK
DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ
TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-018/18

Publication Language: English

Filing Language: English

English Abstract

Electromagnetic scalpels for use on biological tissue. The devices accomplish the tasks of tissue **heating**, ablation, and even cauterization without electrodes, by directing electromagnetic energy to the tissue. The structure of one of the novel devices consists of four separate "U" -shaped ferrite cores (30, 32, 34, 36) oriented at 90 degrees to each other, each with one of their respective legs in contact and parallel to the other three, and with their respective "U" openings facing the same way. Wrapped around the four legs in contact is a single winding (28) of conductive metal with the winding filling the spaces formed by the "U" -shaped cores.

Legal Status (Type, Date, Text)

Publication 20010201 A1 With international search report.

Publication 20010201 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

Examination 20010517 Request for preliminary examination prior to end of 19th month from priority date

Detailed Description

...United States Patent 5,458,596 to Lax, et. al., Oct. 17, 1995. There, a **probe** is employed with a lead in'ection electrode and a trailing band electrode as part of a 2.3 mm laproscopic **probe**.

There are multiple patents that utilize RF **electrical** energy with electrodes in a **catheter** or endoscope to accomplish tissue ablation. Among those are: United States Patent No. 5,843,075, issued to Taylor Dec. 1, 1998, and entitled " **Probe** for **Thermal** Ablation"; United States Patent No. 5,906,613 issued to Muller, et. al. May 25...

...These newer **probes** can also be applied for treating damaged **spinal** disks. A **spinal** disk consists of rings of ligaments around a gel-filled center. When the ligaments are torn, blood vessels grow into the tear, bringing nerve endings with them. Bending of the **spine** squeezes the nerves and causes pain. Traditionally there have been two approaches to this problem...

11/5,K/14 (Item 13 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00758023 **Image available**

SYSTEMS AND METHODS FOR ELECTROSURGICAL TREATMENT OF INTERVERTEBRAL DISCS

Patent Applicant/Assignee:

ARTHROCARE CORPORATION, 595 North Pastoria Avenue, Sunnyvale, CA 94086,
US, US (Residence), US (Nationality)

Inventor(s):

HOVDA David C, 1900 Miramonte Avenue, Mountain View, CA 94040, US
ELLSBERRY Maria B, 43671 Skye Road, Fremont, CA 94539, US
THAPLIYAL Hira V, 1192 Volti Lane, Los Altos, CA 94024, US
EGGERS Philip E, 5366 Reserve Drive, Dublin, OH 43017, US

Legal Representative:

RAFFLE John T, ArthroCare Corporation, 595 North Pastoria Avenue,
Sunnyvale, CA 94086, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200071043 A1 20001130 (WO 0071043)

Application: WO 2000US13706 20000517 (PCT/WO US0013706)

Priority Application: US 99316472 19990521; US 2000204206 20000512

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK

DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR

LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ

TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-018/14

Publication Language: English

Filing Language: English

English Abstract

This invention is systems, apparatus, methods for ablation, resection, aspiration, collagen shrinkage, hemostasis of tissue, other body structures in open, and endoscopic **spine** surgery. In particular, the present invention includes a channeling technique in which small holes or channels are formed within **spinal discs**, and **thermal** energy is applied to the tissue surface immediately surrounding these holes or channels to cause **thermal** damage to the tissue surface, thereby stiffening the surrounding tissue structure for reducing the volume of the **disc** to relieve pressure on the surrounding nerves. High frequency voltage is applied between one or more active electrode(362), and one or more return electrode (360) to volumetrically remove or ablate at least a portion of the **disc** tissue. The active electrodes are advanced through the space left by the ablated tissue to form a channel, hole, divot, or other space in the **disc** tissue. In addition, the high frequency voltage effects a controlled depth of **thermal heating** of the tissue surrounding the hole to de-bulk, and/or stiffen the **disc** structure, thereby relieving neck or back pain.

Legal Status (Type, Date, Text)

Publication 20001130 A1 With international search report.

Examination 20010531 Request for preliminary examination prior to end of
19th month from priority date

Detailed Description

...the principles of the present invention; Figs. 23-25 illustrates another method of treating a **spinal disc** with one of the **catheters** or **probes** of the present invention; Fig. 26 is a schematic view of the proximal portion of another 20 electrosurgical system for endoscopic **spine** surgery incorporating an electrosurgical instrument according to the present invention; Fig. 27 is an enlarged...

11/5,K/15 (Item 14 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2003 WIPO/Univentio. All rts. reserv.

00749686 **Image available**

SYSTEMS AND METHODS FOR ELECTROSURGICAL TREATMENT OF SUBMUCOSAL TISSUE

Patent Applicant/Assignee:

ARTHROCARE CORPORATION, 595 North Pastoria Avenue, Sunnyvale, CA 94086,
US, US (Residence), US (Nationality)

Inventor(s):

ELLSBERRY Maria B, 548 Praderia Circle, Fremont, CA 94539, US,
HOVDA David C, 1900 Miramonte Avenue, Mountain View, CA 94040, US,
WOLOSZKO Jean, 1694 Columbia Drive, Mountain View, CA 94040, US,
THAPLIYAL Hira V, 1192 Volti Lane, Los Altos, CA 94024, US,
EGGERS Philip E, 5366 Reserve Drive, Dublin, OH 43017, US,

Legal Representative:

RAFFLE John T (agent), ArthroCare Corporation, 595 North Pastoria Avenue,
Sunnyvale, CA 94086, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200062698 A1 20001026 (WO 0062698)

Application: WO 2000US10674 20000419 (PCT/WO US0010674)

Priority Application: US 99295687 19990421

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK

DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR

LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ

TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: **A61B-018/14**

Publication Language: English

Filing Language: English

English Abstract

The present invention provides systems (11), methods for selectively applying **electrical** energy to a target location within the head, the neck of a patient's body, particularly including tissue in the ear, nose and throat. The present invention includes a channeling technique in which small holes or channels are formed within tissue structures in the mouth, such as the tonsils, tongue, palate and uvula. **Thermal** energy is applied to the tissue surface immediately surrounding these holes or channels to cause **thermal** damage to the tissue surface, thereby stiffening the surrounding tissue structure. Applicant has discovered that such stiffening of certain tissue structures in the mouth, and throat helps to prevent the tissue structure from obstructing the patient's upper airway during sleep.

Legal Status (Type, Date, Text)

Publication 20001026 A1 With international search report.
Examination 20010222 Request for preliminary examination prior to end of
19th month from priority date
Correction 20020613 Corrected version of Pamphlet: pages 1/30-30/30,
drawings, replaced by new pages 1/30-30/30; due to
late transmittal by the receiving Office
Republication 20020613 A1 With international search report.

Detailed Description

...surface surrounding the hole. In addition, the high frequency voltage effects a controlled depth of **thermal heating** of the tissue surrounding the hole to thermally damage at least the surface of this tissue without destroying or otherwise debulking the formation and to conduct **electric** current between the active and return electrodes. This 1 0 procedure stiffens the base of...

continue to conduct **electric** current to the return electrode. This selective ablation or removal of lower **impedance** tissue in combination with the CoblationTM mechanism of the 1.5 present invention allows the...

...the shaft is sized for delivery through a percutaneous opening in the patient to a **spinal disc**.

11/5,K/17 (Item 16 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00567161 **Image available**
SPHERICALLY-SHAPED BIOMEDICAL IC
CIRCUIT INTEGRE BIOMEDICAL SPHERIQUE

Patent Applicant/Assignee:

BALL SEMICONDUCTOR INC,
ISHIKAWA Akira,
TAKEDA Nabuo,
AHN Suzanne I,
AHN Samuel S,
HAYS Steven R,
GAFFNEY F Andrew,

Inventor(s):

ISHIKAWA Akira,
TAKEDA Nabuo,
AHN Suzanne I,
AHN Samuel S,
HAYS Steven R,
GAFFNEY F Andrew,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200030534 A1.20000602 (WO 0030534)
Application: WO 99US27904 19991124 (PCT/WO US9927904)
Priority Application: US 98110107 19981125

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK
DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ
TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM
AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL

PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: **A61B-005/00**
Publication Language: English

English Abstract

The present invention provides a biomedical semiconductor integrated circuit device that is spherical in shape (ball) for implantation in the biological medium (500) to be monitored or affected. The spherical-shaped IC (510) may include transducers (560) to perform a wide variety of instrumentation, monitoring and test or treatment regimes. The curvature of the semiconductor ball (510) allows for fabrication of more than one sensor on the ball to provide for three dimensional physiological parameter (515) monitoring. The ball (510) can be adapted to body tissue and/or tissue prosthetics, artificial organs, and biomedical implements by fixation, floatation or attachment to a **catheter** (505). More than one ball having one or more sensors can be used. Powering of the ball can be provided by electromagnetic coupling or on-board battery sourcing (battery ball).

Detailed Description

..an embodiment having a ball semiconductor IC according to the present disclosure attached to a **catheter** which is inserted into an artery for monitoring ion concentration; FIGURE 6 illustrates placement of a **catheter** containing a pressure transducer-containing ball introduced into the intraventricular space to monitor intracerebral pressure...

...This may be particularly beneficial in monitoring the stress or compression force generated on vertebral **discs** in individuals required to lift heavy objects as well as postmenopausal women who frequently develop...ball semiconductor IC can be injected or implanted alone as a unit or attached by **catheter**, guidewire, stylet or needle. For intracerebral applications, such as the subarachnoid, intraventricular, or epidural spaces and intracerebral or **spinal** cord locations, the ball can be injected or implanted as a unit or alone or attached to a **catheter**, guidewire, stylet, trocar or fiberoptic device or needle. For pulmonary applications, the ball can be inhaled or inserted attached to a **catheter**, guidewire, stylet or bronchoscope. For gastrointestinal applications, the spherical-shaped The fabrication of a spherical...

...into the IC surface. Again, this would allow local delivery of treatment such as laser, **ultrasound**, **heat**, rotary ablation, and pharmacologic agents to tumors or bacterial foci....

11/5,K/19 (Item 18 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00517078

AN ELECTROSURGICAL INSTRUMENT
INSTRUMENT ELECTROCHIRURGICAL

Patent Applicant/Assignee:

GYRUS MEDICAL LIMITED,
GOBLE Nigel Mark,
GOBLE Colin Charles Owen,

Inventor(s):

GOBLE Nigel Mark,
GOBLE Colin Charles Owen,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9948430 A1 19990930
Application: WO 99GB952 19990326 (PCT/WO GB9900952)
Priority Application: GB 986624 19980326; GB 987303 19980403

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE

ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD
RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF
CG CI CM GA GN GW ML MR NE SN TD TG

Main International Patent Class: A61B-017/39

Publication Language: English

English Abstract

An electrosurgical instrument is disclosed for the treatment of tissue in the presence of an **electrically** -conductive fluid. The instrument comprises an instrument shaft, and a tissue treatment electrode at one end of the shaft, the tissue treatment electrode being constructed to define **thermal** barriers for limiting **thermal** conduction therealong, thereby to encourage the formation and maintenance of a layer of vapour over the electrode.

Detailed Description

... relates to an electrosurgical instrument for the treatment of tissue in the presence of an **electrically** -conductive fluid medium, to electrosurgical apparatus including such an instrument, and to an electrode unit...high power with a 1 5 monopolar arrangement is also hazardous, due to the tissue **heating** that occurs at the return plate which can cause severe skin burns. There is also...

...There are a number of variations to the basic design of the bipolar **probe**. For example, U.S. Patent Specification No.4706667 describes one of the fundamentals of the...

...The electrode structure of this instrument, in combination with an **electricallyconductive** fluid medium, largely avoids the problems experienced with monopolar or bipolar electrosurgery. In particular, input...The formation of the vapour pocket 24 creates about a 10-fold increase in contact **impedance**, with a consequent increase in output voltage. Arcs 26 are created in the vapour pocket...

...and tendon debridement as applied to any of the synovial joints of the body; inducing **thermal** shrinkage of joint capsules as a treatment for recurrent dislocation. subluxation or repetitive stress injury to any articulated joint of the body; discectomy either in the treatment of **disc** prolapse or as part of a **spinal** fusion via a posterior or anterior approach to the cervical, thoracic and lumbar **spine** or any other fibrous joint for similar purposes; excision of diseased tissue; and haemostasis...include introducing the electrode assembly to the surgical site whether through an artificial conduit (a **cannula**), or through a natural conduit which may be in an anatomical body cavity or space...

11/5,K/21 (Item 20 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00510685 **Image available**

SYSTEMS AND METHODS FOR ELECTROSURGICAL SPINE SURGERY
SYSTEMES ET PROCEDES POUR L'ELECTROCHIRURGIE DE LA COLONNE VERTEBRALE

Patent Applicant/Assignee: .

ARTHROCARE CORPORATION,

Inventor(s):

UNDERWOOD Ronald A,

DAVISON Terry S,

THAPLIYAL Hira V,

EGGERS Philip E,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9942037 A1 19990826

Application: WO 99US3339 19990217 (PCT/WO US9903339)

Priority Application: US 9826851 19980220; US 9826698 19980220

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ
VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH
CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW
ML MR NE SN TD TG

Main International Patent Class: A61B-017/00

Publication Language: English

English Abstract

The present invention provides systems and methods for selectively applying **electrical** energy to a target location within a patient's body, particularly including tissue in the **spine**. The present invention applies high frequency (RF) **electrical** energy to one or more electrode terminals (58) in the presence of **electrically** conductive fluid (50) to remove, contract or otherwise modify the structure of tissue structures. In one aspect of the invention, a method is provided for treating herniated **discs** within a patient's **spine** by applying sufficient **electrical** energy to the **disc** tissue to reduce a volume of the **disc**, thereby relieving pressure on a **spinal** nerve. In one embodiment, the high frequency voltage is sufficient to ablate a portion of the nucleus pulposis, either the extruded portion outside of the annulus or a portion or all of the **pulposis** within the **annulus**. In another embodiment, the electrode terminal is advanced into the annulus and sufficient high frequency voltage is applied to contract or shrink the collagen fibers within the nucleus pulposis. This causes the pulposis to shrink and with draw from its impingement on the **spinal** nerve.

Detailed Description

...field of electrosurgery, and more particularly to surgical devices and methods which employ high frequency **electrical** energy to treat tissue in regions of the **spine**. The present invention is particularly suited for the treatment of herniated **discs**...

...feedback to judge how deeply the laser is cutting. Because healthy tissue, bones, ligaments and **spinal** nerves often lie within close proximity of the **spinal disc**, it is essential to maintain a minimum depth of tissue damage, which cannot always be ensured with a laser. Monopolar radiofrequency

devices have been used in limited roles in **spine** surgery, such as to cauterize severed vessels to improve visualization. These monopolar devices, however, suffer from the disadvantage that the **electric** current will flow through undefined paths in the patient's body, thereby increasing the risk of unwanted **electrical** stimulation to portions of the patient's body. In addition, since the defined path through the patient's body has a relatively high **impedance** (because of the large distance or resistivity of the patient's body), large voltage differences...

11/5,K/22 (Item 21 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00496509 **Image available**

APPARATUS FOR DETERMINING A MEASURE OF TISSUE MANIPULATION
DISPOSITIF PERMETTANT DE DEFINIR UNE MESURE DE MANIPULATION DES TISSUS

Patent Applicant/Assignee:

UROS CORPORATION,

Inventor(s):

ZUPKAS Paul F,

MATSUURA David G,

HOLDAWAY Charles R,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9927861 A1 19990610

Application: WO 98US24987 19981119 (PCT/WO US9824987)

Priority Application: US 97982753 19971202

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ
VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH
CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW
ML MR NE SN TD TG

Main International Patent Class: A61B-017/36

International Patent Class: A61B-008/12

Publication Language: English

English Abstract

A surgical device is comprised of a **probe** (16) adapted for insertion into a patient. The **probe** (16) has a means for manipulating tissue within a zone of manipulation. The **probe** (16) also has a first receiver (26) which is disposed within the zone of manipulation. The first receiver (26) responds to receipt of a radiated signal (34) by generation of a first receiver signal indicating a strength at which the radiated signal is received. A means for analyzing (40) the first receiver signal determines a measure of manipulation to the tissue within the zone of manipulation. In one embodiment, the first receiver (26) is disposed at the tip of the **probe** (16). In another embodiment, the means for manipulating removes energy from the tissue. In yet another embodiment, the means for manipulating adds energy to the tissue so as to alter the tissue. Optionally, the means for analyzing (40) accumulates a set of values of the first receiver signal over time in order to determine the measure of manipulation. A scanner (20) generates the radiated signal. Optionally, the scanner (20) is an **ultrasonic** scanner and the radiated signal is an **ultrasonic** signal.

Detailed Description

... PTCA) uses fluoroscopy to position a tiny balloon at the end of a long flexible **catheter** in a coronary artery where a stricture has reduced blood flow to the heart...

...to the above description of a manipulation process employing cryosurgery is a manipulative process involving **heating** of tissue. In such a case, the manipulation tool is not a cryoprobe, but rather a **probe** to deliver **microwave**, RF, or other energy form that **heats** tissue. Such devices are commercially available and are presently used to ablate tissue of the prostate and endometrium. **Heating** tissue causes cell destruction leading to necrosis of tissue within a **thermal** zone surrounding the **heating** component. Just as in cryosurgery, monitoring of the effected zone is critical during the **heating** process to ensure destruction of all diseased tissue and the preservation of healthy surrounding tissue.

The surgical procedure for destroying a target tissue with a **heating probe** begins by placing the **probe** in the target tissue mass. **Ultrasound** imaging is typically used to guide the **probe** in a minimally invasive manner. An **ultrasound** transducer on the **probe** in close proximity to the **heating** element is used to facilitate the positioning of the **probe**. In similar fashion to the freezing **probe** **ultrasound** transducer, the **heating probe ultrasound** transducer generates an **ultrasound** signal. The signal is detected by the imaging system causing an indication to be displayed in the monitor of the imaging system at the **ultrasound** transducer on the **probe**. Thus, the imaging system defines the exact location of the **probe** tip and **heating** element. As the manipulation process **heats** tissue surrounding the **probe** tip, the **ultrasound** transducer continues to produce an image of the **probe** and surrounding tissue. Adding **thermal** energy to tissue changes the structure and density of the tissue, and, thus, affects the...

11/5,K/23 (Item 22 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2003 WIPO/Univentio. All rts. reserv.

00488839 **Image available**

SPLIT TIP ELECTRODE CATHETER

CATHETER -ELECTRODE A POINTE DIVISEE

Patent Applicant/Assignee:

ORATEC INTERVENTIONS INC,

ASHLEY John E,

Inventor(s):

ASHLEY John E,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9920191 A1 19990429

Application: WO 98US21711 19981014 (PCT/WO US9821711)

Priority Application: US 9764833 19971022; US 98158320 19980922

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES

FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV

MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG

US US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM

AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM

GA GN GW ML MR NE SN TD TG

Main International Patent Class: **A61B-017/39**

Publication Language: English

English Abstract

Systems and methods are described for treating tissue with **thermal** energy while minimizing the amount of **thermal** energy to which adjacent tissue is exposed. A surgical instrument for delivering **thermal** energy to a section of tissue during percutaneous surgery, includes: an elongated shaft having a proximal end and a distal end; and a split tip electrode coupled to said distal end, said split tip electrode i) including a first component and a second component coupled to said first component, and ii) defining a principle axis. The **thermal** energy is delivered to said section of tissue so as to **heat** said section of tissue asymmetrically with regard to said principle axis of said split tip electrode. The systems and methods provide advantages in that **thermal** energy can be directed to one side of the split tip so that a first of two juxtaposed areas of a surgical site can be **heated** while a second of the two juxtaposed layers is substantially not **heated**. In alternate embodiments a portion of the site may be actively **cooled** while an adjacent portion of the site may be actively **cooled**.

Detailed Description

...during percutaneous surgery. Specifically, a preferred implementation of the present invention relates to an elongated **catheter** with a longitudinally split tip for directing **thermal** energy toward one side of the **catheter** during percutaneous surgery. The present invention thus relates to a surgical method and apparatus of...

...For example, intervertebral **discs** contain collagen that can be effectively treated with **thermal** energy to repair and/or reinforce the **disc**. However, there are **spinal** nerves on the outside of intervertebral **discs** next to the posterior and the posterior lateral areas of the **discs**. While the **discs** can be thermally treated, the **spinal** nerves should not be thermally treated.

...reduced diameter. The diameter of the lower base portion is dimensional to fit within a **probe**. A through hole 258 is displaced from the centerline of the tip and extends...The solder or thin film of metal provides an increased service area which reduces the **electrical impedance** of the circuit compared to the use of just the wire frame electrode 200...

11/5,K/24 (Item 23 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2003 WIPO/Univentio. All rts. reserv.

00472057 **Image available**

AN ELECTROSURGICAL INSTRUMENT INSTRUMENT ELECTROCHIRURGICAL

Patent Applicant/Assignee:

GYRUS MEDICAL LIMITED,
GOBLE Nigel Mark,
GOBLE Colin Charles Owen,
SYROP Alan Nigel,

Inventor(s):

GOBLE Nigel Mark,
GOBLE Colin Charles Owen,
SYROP Alan Nigel,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9903409 A1 19990128

Application: WO 98GB2094 19980715 (PCT/WO GB9802094)
Priority Application: GB 9715200 19970718; GB 9726952 19971219; GB
9814727 19980707

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US
UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE
CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN
GW ML MR NE SN TD TG

Main International Patent Class: A61B-017/39

Publication Language: English

English Abstract

An electrosurgical instrument is provided for the treatment of tissue in the presence of an **electrically** -conductive fluid medium. The instrument comprises an instrument shaft (10), a tissue treatment electrode (12) at one end of the shaft, and removal means, the instrument having an apertured portion (20a) through which matter can be aspirated by the removal means from the region surrounding the tissue treatment electrode. The removal means comprises a channel formed within the instrument shaft (10) and leading from the apertured portion (20a). The channel is provided with agitation means (14) for preventing the build-up of sublimation products within the channel.

11/5,K/25 (Item 24 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00472056 **Image available**

AN ELECTROSURGICAL INSTRUMENT INSTRUMENT ELECTROCHIRURGICAL

Patent Applicant/Assignee:

GYRUS MEDICAL LIMITED,
GOBLE Nigel Mark,
GOBLE Colin Charles Owen,
SYROP Alan Nigel,

Inventor(s):

GOBLE Nigel Mark,
GOBLE Colin Charles Owen,
SYROP Alan Nigel,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9903408 A1 19990128
Application: WO 98GB2081 19980715 (PCT/WO GB9802081)
Priority Application: GB 9715199 19970718; GB 9726952 19971219; GB
9814727 19980707

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US
UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE
CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN
GW ML MR NE SN TD TG

Main International Patent Class: A61B-017/39

Publication Language: English

English Abstract

An electrosurgical instrument is provided for the treatment of tissue in

the presence of an **electrically** -conductive fluid medium. The instrument comprises an instrument shaft (10), and a tissue treatment electrode (12) at the distal end of the shaft for electrosurgically excising tissue pieces at an operation site. The tissue treatment electrode (12) is cyclically movable relative to the distal end of the shaft (10). Threshold control means are provided for controlling the power threshold for vaporisation of the **electrically** -conductive fluid medium at the tissue treatment electrode (12).

11/5,K/26 (Item 25 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00472055 **Image available**

AN ELECTROSURGICAL INSTRUMENT
INSTRUMENT ELECTROCHIRURGICAL

Patent Applicant/Assignee:

GYRUS MEDICAL LIMITED,
GOBLE Nigel Mark,
GOBLE Colin Charles Owen,
SYROP Alan Nigel,

Inventor(s):

GOBLE Nigel Mark,
GOBLE Colin Charles Owen,
SYROP Alan Nigel,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9903407 A1 19990128
Application: WO 98GB2080 19980715 (PCT/WO GB9802080)
Priority Application: GB 9715197 19970718; GB 9726952 19971219; GB
9814727 19980707

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US
UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE
CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN
GW ML MR NE SN TD TG

Main International Patent Class: **A61B-017/39**

Publication Language: English

English Abstract

An electrosurgical instrument is provided for the treatment of tissue in the presence of an **electrically** -conductive fluid medium. The instrument comprises an instrument shaft (10), a tissue treatment electrode (12) at the distal end of the shaft for electrosurgically excising tissue pieces at an operation site, morcellation means for electrosurgically reducing the size of excised tissue pieces, and removal means for removing morcellated tissue pieces. The instrument has an apertured portion (20a) through which matter can be aspirated by the removal means from the region surrounding the tissue treatment electrode (12). The removal means comprises a channel formed within the instrument shaft (10) and leading from the apertured portion (20a). The tissue treatment electrode (12) is movable cyclically relative to the distal end of the shaft (10), and constitutes the morcellation means.

Set	Items	Description
S1	97280	DISC? ? OR (ANNULUS OR ANULUS OR ANULI OR ANNULI) (2N) PULPO- S?
S2	113324	PROBE? ?
S3	870206	ELECTRIC? OR MICROWAVE? ? OR ULTRASOUND? ? OR ULTRASONIC? - OR ULTRA() (SOUND OR SONIC? ?) OR THERMAL OR HEAT??? OR CRYOGE- N? OR COOL???
S4	318891	CATHETHER? ? OR CATHETER? ? OR CANNULA? OR TUBE? ? OR TUBI- NG? ? OR INTRODUCER? ?
S5	48175	BIOIMPEDANC? OR IMPEDANC?
S6	309	S1 AND S2 AND S3 AND S4 AND S5
S7	98	S6 AND IC=(A61B OR A61K OR A61N)
S8	20	S1 AND S2(S)S3(S)S4(S)S5
S9	20	IDPAT (sorted in duplicate/non-duplicate order)
S10	18	IDPAT (primary/non-duplicate records only)
S11	34	S7 AND (INVERTEBRA? OR SPINE OR SPINAL OR BACKBONE)
S12	34	IDPAT (sorted in duplicate/non-duplicate order)
S13	34	IDPAT (primary/non-duplicate records only)
S14	2	S7 AND INVERTEBRA?

? show files

File 348:EUROPEAN PATENTS 1978-2003/Apr W04

(c) 2003 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20030515,UT=20030508

(c) 2003 WIPO/Univentio

Bibho
NPL

6/5/1 (Item 1 from file: 8)
DIALOG(R) File 8: Ei Compendex(R)
(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

02295353 E.I. Monthly No: EI8708083530

Title: REMOTELY CONTROLLED CROSSED COILS NMR PROBE .

Author: Kowalewski, V. L.; Raggio, N.; Lembo, R. R.

Corporate Source: Univ of Buenos Aires, Buenos Aires, Argent

Source: Journal of Physics E: Scientific Instruments v 20 n 5 May 1987 p
545-546

Publication Year: 1987

CODEN: JPSIAE ISSN: 0022-3735

Language: ENGLISH

Document Type: JA; (Journal Article) Treatment: A; (Applications); X;
(Experimental)

Journal Announcement: 8708

Abstract: By making use of a bridge circuit initially proposed by A. Serner for the measurement of **impedances** at low frequencies and the properties of transmission lines, a crossed coils NMR **probe** was built for 100 MHz with all its controls separated from the **probe** itself. The body of the **probe** was made from a short length (14 mm) of 5 in (127 mm) copper **tubing**, which was found to be the least magnetic material available. This is closed like a pillbox with two **discs** of dual-faced copper-clad fiberglass board (printed circuit board). The internal face, in direct contact with the body, acts as a shield. The external one has two spirals etched on it which act respectively as modulation and sweep coils. Since we are working at a rather high frequency the continuity of the shield is very important. It was found that if a slot is cut across the diameter of one, or both, of the internal shields, its angular position had a marked influence on the leakage. (Edited author abstract) 3 refs.

Descriptors: **PROBES** --*Design; NUCLEAR MAGNETIC RESONANCE--Measurements;
ELECTRIC MEASURING BRIDGES--Applications; **ELECTRIC** MEASUREMENTS--
Impedance

Identifiers: TRANSMITTER COILS; MINIMUM LEAKAGE; NMR **PROBE**

Set	Items	Description
S1	253319	DISC? ? OR (ANNULUS OR ANULUS OR ANULI OR ANNULI) (2N) PULPO-S?
S2	1029637	PROBE? ?
S3	8295916	ELECTRIC? OR MICROWAVE? ? OR ULTRASOUND? ? OR ULTRASONIC? - OR ULTRA() (SOUND OR SONIC? ?) OR THERMAL OR HEAT??? OR CRYOGEN? OR COOL???
S4	1330618	CATHETHER? ? OR CATHETER? ? OR CANNULA? OR TUBE? ? OR TUBING? ? OR INTRODUCER? ?
S5	289319	BIOIMPEDANC? OR IMPEDANC?
S6	1	S1 AND S2 AND S3 AND S4 AND S5
? show files		
File	2:INSPEC 1969-2003/May W2	(c) 2003 Institution of Electrical Engineers
File	5:Biosis Previews(R) 1969-2003/May W3	(c) 2003 BIOSIS
File	6:NTIS 1964-2003/May W3	(c) 2003 NTIS, Intl Cpyrght All Rights Res
File	8:Ei Compendex(R) 1970-2003/May W2	(c) 2003 Elsevier Eng. Info. Inc.
File	34:SciSearch(R) Cited Ref Sci 1990-2003/May W3	(c) 2003 Inst for Sci Info
File	35:Dissertation Abs Online 1861-2003/Apr	(c) 2003 ProQuest Info&Learning
File	65:Inside Conferences 1993-2003/May W2	(c) 2003 BLDSC all rts. reserv.
File	73:EMBASE 1974-2003/May W3	(c) 2003 Elsevier Science B.V.
File	94:JICST-EPlus 1985-2003/May W3	(c) 2003 Japan Science and Tech Corp(JST)
File	144:Pascal 1973-2003/May W2	(c) 2003 INIST/CNRS
File	155:MEDLINE(R) 1966-2003/May W3	(c) format only 2003 The Dialog Corp.
File	172:EMBASE Alert 2003/May W3	(c) 2003 Elsevier Science B.V.
File	198:Health Devices Alerts(R) 1977-2003/May W3	(c) 2003 ECRI-nonprft agncy
File	434:SciSearch(R) Cited Ref Sci 1974-1989/Dec	(c) 1998 Inst for Sci Info
File	48:SPORTDiscus 1962-2003/May	(c) 2003 Sport Information Resource Centre
File	71:ELSEVIER BIOBASE 1994-2003/May W3	(c) 2003 Elsevier Science B.V.
File	91:MANTIS(TM) 1880-2002/Oct	2002 (c) Action Potential
File	162:Global Health 1983-2003/Apr	(c) 2003 CAB International
File	164:Allied & Complementary Medicine 1984-2003/May	(c) 2003 BLHCIS
File	467:ExtraMED(tm) 2000/Dec	(c) 2001 Informania Ltd.